# UK COOPERATIVE EXTENSION SERVICE UNIVERSITY OF KENTUCKY-COLLEGE OF AGRICULTURE

**Department of Forestry Fact Sheet FORFS 02-02** 

# **Products Made From Wood**

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List created July, 2002 from a number of other lists, with additions. Corrections and Additions will be welcomed! (tconners@uky.edu)

#### Solid Wood Products

Lumber and plywood to build new homes Doors Window frames and sills Flooring I-ioists LVL (laminated veneer lumber) Parallel strand lumber Finger-jointed lumber Machine stress-rated lumber Coat racks Furniture Dining room tables Upholstered furniture frames Rocking chairs End tables Coffee tables Beds Bookcases Nightstands Bureaus Landscape timbers Highway guard rails Snowshoes Toothpicks Match sticks Chopsticks Shutters Baseball bats Canoe paddles and oars Musical instruments: Guitars Pianos Organs and organ pedals Oboes **Bagpipes** Banjos Clarinets Flutes/Fifes Mandolins String bass Violins Violin bows Cellos Bassoons Drums

Drum Sticks Tambourines Wood blocks Speaker cabinets Amplifier cabinets Metronomes **Xylophones** Harmonicas Stage flooring Sandboxes and Backyard play sets Charcoal Tool handles Toilet plungers Medicine cabinets Parallel bars Vinevard stakes Toys such as wooden blocks Rulers Birdhouses Fencing, fence posts and rails Firewood Fishing boats Ladders Hockey sticks Dog houses Pallets Particleboard Medium density fiberboard (MDF) (used in kitchen cabinets and furniture panels, for example) Hardboard Garage doors Gazebos Hot tubs and spas Lath Trellises Kitchen utensils Pencils Ping Pong paddles Golf tees Animal bedding Railroad ties Seesaws Model airplanes Coffins

Brush handles Cable reels Canes Cedar chests Cedar closet lining Activated charcoal Church pews and altars Closet rods Barrels Crutches Desks Docks Decks Kitchen cabinets Ferryboats Gazebos Grandfather clocks Stair rails Truck and trailer flooring Mouldings and baseboards Paneling Picnic tables Pilings for building construction Popsicle sticks Porch swings Produce crates and boxes Propeller shaft bearings for ships Rocking horses Rowboats Shingles House siding Putty-type of wood filler Tongue depressors Totem poles Sleds Salad bowls and serving ware Telephone poles Wheelbarrow handles Wood carvings Wooden nickels Pegboard Ship masts and yardarms Toilet seats Piano keys (wooden) Rolling pins

Knife handles Childrenís puzzles Work benches Toboggans Bookcases Park benches Gun racks and cabinets Billboards Snow fences Trellises Parallel bars Log houses Bowling alley lanes Bowling pins Railroad crossing gates Rural bridges Tent poles Hurdles Lobster pots and floats Wooden matches Parts of snowboards, skis and skateboards Ventriloquist dummies Name tags Flagpoles (for smaller flags) Cribs Police batons Planters Dowels Scaffold planks Concrete forms Glu-lam beams (used to create long open spaces, as in churches) Excelsior Veneer Bushel baskets Pants hangers Kitchen counters Woodcut artwork Merry-go-Round horses Birdhouses Snowshoes Woodworking clamps Spinning wheels Baskets Novelties such as Nutcrackers Checker sets Jewelry boxes Foundry patterns Crates Garage doors Theatre scenery Gunstocks **Beehives** Mallets Butcher blocks Organ pipes Crucifixes Drafting tables Ballot boxes

Doll houses Test tube racks Wine racks Handrails Stake-body truck sides Gerbil chew sticks (balsa wood) Yo-yos Dice Silverware chests Venetian blinds Billiard cue sticks Fuel for meat smokers Spices and flavorings Allspice Annatto Bay leaves Cinnamon Cloves FilÈ (Sassafras leaves, used to thicken gumbos) Juniper berries (gin flavoring) Mace Nutmeg Orange blossoms (flavored water) Chips for smoking meat Sassafras oil is used as a soap perfume Logs provide nutrients for shiitake mushrooms Cutting boards Model airplanes ìBiscuitsî for wood joining

#### Products that Used to be Made

#### From Wood

(Some of these may still be made from wood for specialty products.)

Water pipes Bocce balls Tennis rackets Car dashboards Golf clubs Conestoga wagons Clocks and clock gears Waterwheels Printing press type Printing presses Deckle boxes (frames used to make paper by hand) Paper presses (to squeeze the water out of handmade paper) Woodworking planes Cigar store Indians Weaving shuttles and bobbins Wooden shoes Bows and arrows Wooden wheels for automobiles and wagons Pull toys Sextants Street paving blocks

Rocking horses Fun house barrels Fishing lures Storage battery separators (hard rubber) Water tanks Wardrobes/armoires Model ìTî coil boxes Automobile chassis Ironing boards Treenails Post and beam timber framing Cabinets for Analytical balances Shoe lasts Radio, television and phonograph/stereo cabinets Butter churns Harpsichords Railroad cars Aircraft propellers and airframes Minesweeper boats, PT boats Silos Fermentation vats Cigar boxes Racing shells (one to eight-man rowed boats) Wringers for washing machines Telephones Wood creosote used to be used as a laxative, a disinfectant and a cough treatment (rarely used nowadays). Woodworking tools Planes Carpenter levels Carpenter rules Tool chests Gear shift knobs Butter molds Slide rules Phonographs Bicycles Travelerís writing desks Cigar molds Artistís pallets Washboards Skis Water well structures Water pump enclosures Wheel chairs Candlesticks Warships Wardrobe trunks Maple syrup buckets Abacus Pulleys Gallows Milking stools Insulator pins Plates and bowls Artificial limbs Sled runners Iceboxes and refrigerators Gutters Spruce gum was used for chewing gum

Sassafras tea Canoes Automobile tires (used rayon as reinforcing cord) Shoe pegs (used to fasten shoe soles to the leather uppers) Dragonís blood (from fruit of Asian tree) was used in the manufacture of varnishes and lacquers Dyestuffs (prior to invention of synthetic dves) Canada balsam (tree resin) was used to make microscope slides Ouinine came from the bark of the Cinchona tree Willow bark provided the original source of aspirin-like compounds Cork used to be the gasket material lining bottle caps Rubber used to be used to waterproof raincoats Molded wooden figurines Typewriter keys (Celluloid) Red elm inner bark used to be steeped in water to obtain a remedy for sore throats Hickory was a part of the Wright brothersí airplanes Cylinder phonograph records used to be made from Carnauba wax because it is so hard Tool handles were made from celluloid as recently as World War II. Piano keys were once made from celluloid as an ivory substitute.

# Things Made from Wood that **Formerly Were Made from** Something Else

Paper (used to be made from cotton and linen rags)

#### **Non-Wood/Non-Paper Products**

Shade! Nuts Cola nuts (Coca-Cola etc.) Almonds Brazil nuts Cashews Hazelnuts Pistachios Walnuts Pecans Hickory nuts Chestnuts Pine nuts Acorns (decorative uses)

Fruits

Apples Avocadoes Coffee Peaches

Oranges Lemons Limes Bananas Pears Tangerines Coconuts Dates Grapefruit Olives and olive oil Plums Figs Fruit juices Carob (a cocoa substitute) Cider Mistletoe (grows as a symbiant on trees) Eucalyptus leaves (floral component, also used for fragrance) Carnauba wax (from the leaves of the carnauba palm tree grown in Brazil). Used in: Shoe polish Lipsticks Automotive waxes Furniture polish Applied to produce to make it look appealing in supermarkets. Products from Wood Sap or Extractives: Citrus cleaners (oils) Lime scent for aftershave Sandalwood fragrance for soap and incense Maple syrup Rubber Rubber products Golf balls Tires Marine and underwater cable insulation Adhesives Combs (hard rubber) Latex gloves and other barrier-type of medical products Rubber belts Rubber hoses Gaskets Shoe soles Rubber boots Rubber balls Turpentine (most of it comes from wood pulping operations) Rosin Pine needle extract (an antiinflammatory) Rosewood oil (various medicinal uses) Taxol (anti-cancer drug) Frankincense Myrrh

Tea tree oil (antibiotic and antifungal oil) Benzoin gum Gum Arabic Corks (the primary use for cork: ~17 billion sold each year, compared to 400 million for plastic stoppers (2001 statistics)) Other cork products Coasters Flooring Dartboards Wall and ceiling tiles Sanding blocks Corkboards Expansion joint filler Insulation corkboard Fishing buoys and floats Cork washers Hot pads Musical instrument parts (e.g., stoppers for organ pipes) Laboratory rings for glassware Bathmats (made of granulated cork) iPeasî for whistles Cricket balls Corks for pop guns Foosball (table football) balls Hockey balls Baseballs Facings for some ping pong paddles Cork shoe soles Roofing

### Products that Used to be

### **Made From Cork**

(Some of these may still be made as specialty products.) Bottle caps gaskets for carbonated beverages Life jackets (until 1857 ñ now mostly polystyrene) Life preservers (polystyrene now) Fishing rod handles (now mostly HypalonÆ) Sheet insulation (*e.g.*, for refrigerators) Rocket nosecones (a cork-ceramic composite)

## **Paper and Fluff Products**

Computer and copy paper Book paper Book marks Envelopes Checkbooks Bulk mail Bills Instruction manuals Packaging cards for blister-packed products

Calendars Diplomas and Certificates Report cards Lamp shades Book covers Concert posters Identification badges Newsletters Recipe cards Salt boxes Sugar and flour bags Can labels (except for tomato cans for some unknown reason!) Bottle and jar labels Cereal boxes Shelf labels in grocery stores Adhesive-backed labels Receipts Menus Poster board Baking cups Coupons US currency is not made from wood pulp ñ itís made from cotton and flax fibers Coffee filters Facial and bath tissue Packaging for facial and bath tissue (the boxes and wrappers) Napkins Sanitary and surgical absorbent products Disposable diapers Kites Catalogs Game boards Masking tape Crepe paper Birthday and Christmas wrapping paper Stickers Coloring books Flashlight battery labels Paper dolls Baseball cards Tracing paper Election ballots Milk cartons Egg cartons Postage stamps Paper towels Playing cards Building insulation, loose and in panel form Grocery Bags Paper Cups File Folders Post-It NotesÆ CD labels DVD and VCR tape packaging Magazines Magazine card inserts Postcards Maps Fast food packaging

Frozen food boxes Construction paper Kraft paper (wrapping paper) Multi-wall sacks for birdseed and pet foods Price tags Sandpaper Seed starter blocks Loudspeaker cones Origami paper Tea bags are usually not made from wood pulp ñ they are mostly made from abaca, also known as Manila hemp Tea bag *labels* are made of wood-based paper Cigarette papers and vacuum cleaner bags are made from hemp or flax fiber! Bible paper Wallpaper Tubes for bathroom tissue and paper towels Artificial snow (paper snow) Wax paper Confetti Admixture with sprayed-on grass seed Food additive (non-digestible cellulose dietary fiber). Used in diet drink products, food texture enhancer. (In the late 1970s, a idiet breadî used cellulose fiber from wood as one of its ingredients.) Butcher paper Musical instrument cases (icardboardî type, as for guitars) Phone books Photographs Newspapers Tickets Business cards Roofing felt Ice cream containers Pizza boxes Disposable tablecloths Retail software boxes Corrugated cartons Ceiling tiles Absorbent socks for oil spills Absorbent liners for supermarket meat trays Stationery and notebook paper NCR (no carbon required) paper Tax forms Marriage licenses, birth and death certificates and other civil documents Racing forms Programs for sporting events Fiber filler for plastics: Tool handles Football helmets Buttons Eyeglass frames

Ball point pens Electronics cases (televisions. calculators, computers) Loudspeakers Automobile parts (*e.g.*, door panels) Packaging Trays Thermoformed products like gun cases Marine/Trailer flooring Wood-plastic composite lumber: Garden benches Picnic tables Planters Fencing Decking Signs Parking stops for parking lots Spare tire covers Melamine paper-faced board

### <u>Things that Formerly Were</u> <u>Made from Wood-based Paper</u>

Oil cans Candy bar wrappers Grocery bags (some still are made from paper!) Library catalog cards (supplanted by computer files) Drinking straws Shotgun cartridges Carbon paper Bumper stickers (now made out of vinyl except for the peel-off paper on the backside) Computer cards (now entirely electronic!)

# <u>Products Made from Wood-</u> <u>Derived Chemicals</u>

(Processed products, not oils or latex, etc. Some cellulose products may derive from other cellulose sources such as cotton linters, depending on economics and manufacturer.)

Textiles (Rayon, Tencelô) Cellulose acetate (wrapping and photographic film)

- Cellulose nitrate (former composition of movie film, except that it was very flammable and unstable with age)
- Celluloid (rarely produced nowadays, except for guitar picks and pick guards, fountain pens, accordion cases and ping-pong balls. Formerly used for costume jewelry, clocks, etc.)
- Cellulose acetate and cellulose nitrate are both used in adhesives and lacquers.

CMC (carboxymethyl cellulose) is used as a food thickener and texturizer for products such as ketchup and ice cream (depending on manufacturer); also used to stabilize oil well drilling muds. Cellulose-based pill fillers Cellophane (wrapping material, also used for Easter basket grass!) Toothpaste additives ( <i>e.g.</i> , cellulose gum) iPlasticî twine Hardhats and sports helmets Cigarette filters (cellulose acetate fibers) Cellulose industrial filters Sausage casings Cellulose spongesArtificial vanilla flavoring (by-product of Kraft process pulping) Cleaning compounds Chewing gum is a combination of natural rubber (especially chicle, from the Sapodilla trees from Central and South America) with some synthetic latexes to extend the natural latex supply. Other wood chemicals such as rosin esters and terpenes are also common ingredi- ents.	<ul> <li>Additive to unfired ceramics to give them strength</li> <li>Fungicides</li> <li>Hair spray</li> <li>Cosmetics ñ including thickeners such as methyl cellulose and methyl†hydroxy†ethyl†cellulose</li> <li>Methanol (used in colognes, solvents)</li> <li>Torula yeast (a food supplement) is grown on wood sugars and wood mineral nutrients leftover from pulping operations. This is used in baby foods, imitation bacon, cereals, baked goods, etc.</li> <li>Tannin (used in natural tanning process, less common than formerly)</li> <li>Carnauba wax is commonly used as a pill coating.</li> <li>Liquid SmokeÆ</li> <li>Linoleum (oxidized linseed oil mixed with pine resin and wood flour)</li> <li>Acetic acid (produced by distillation of wood)</li> <li>Biofuels from wood distillation</li> <li>Liquid nail polish</li> <li>Shaving cream (tea tree oil, camphor, etc.,</li> </ul>	varies by manufacturer) Suntan lotion ( <i>e.g.</i> , almond oil (emollient); clove bud oil (scent); cocoa butter (emollient)) Ink (incorporate tall oil rosins from hard pines) Tall oil fatty acids and derivatives are used as: PVC stabilizers Synthetic lubricants Polyamides Corrosion inhibitors Soaps Detergents Emulsifiers Rubber processing additives Asphalt additives Concrete additives Epoxy additives Plasticizers Metalworking chemicals Oil field chemicals Rosin-based adhesive products Also, see the list of products from Extractives (above)
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#### To grow a pound of wood, a tree uses 1.47 pounds of carbon dioxide and gives off 1.07 pounds of oxygen. The following information is copied from the website of the Temperate Forest Foundation {http://www.forestinfo.org/ Discover/facts.htm#Recycling}:

- ∑ In 1995, some 1.6 billion seedlings were planted in the U.S. more than 5 new trees a year for every American.† Millions of additional trees were naturally reforested.
- $\sum$  Private owners account for 59% of the nation 490 million acres of commercial forestland; government owns 27%; and the forest industry owns 14%.
- $\Sigma$  Each person in the United States consumes approximately 675 pounds of paper a year.
- $\sum$  On the average, everyone uses the equivalent of a tree, 18 inches in diameter 100 foot tall, every year. That is 80 cubic feet!

# The United States is a wood-rich country; people in the United States (on average) use about three times as much wood each day as people in the rest of the world. One of the most common uses for wood around the world is for fuel!

#### And finally, a surprise for (almost) all Kentuckians:

# 3M Corporationís popular product, Post-It Notes, are manufactured exclusively in Cynthiana, (Harrison County), Kentucky!

<sup>(</sup>T. Conners 07/02)

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